REMARKS

In the October 11, 2006, Office Action, the United States Patent and Trademark Office (hereinafter "the Office") objected to the drawings because the Office cannot find mentionings of element 116 (FIGURE 1); element 492 (FIGURE 4J); and elements 332RC-RE (FIGURE 3F). Claims 1-19 were rejected as being unpatentable under the judicially-created doctrine of obviousness-type double patenting for disclosing claimed subject matter that is disclosed in copending U.S. Patent Application No. 10/607,370. Claims 13-19 were rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-19 were rejected under 35 U.S.C. § 102(b) as being anticipated by Emin Gün Sirer and Ke Wang, "An Access Control Language for Web Services," SACMAT (June 3-4, 2002) ("Sirer et al.").

To address the drawing objections, the pending specification has been amended to mention element 116 (FIGURE 1); element 492 (FIGURE 4J); and elements 332RC-RE (FIGURE 3F). Withdrawal of the drawing objections is respectfully requested. To address the double patenting rejections, a terminal disclaimer is submitted herewith. Withdrawal of the double patenting rejections of Claims 1-19 is respectfully requested. Without admitting to the propriety of the rejections of Claims 13-19 under 35 U.S.C. § 101, Claim 13 has been amended to clarify the claimed invention. Withdrawal of the rejections of Claims 13-19 under 35 U.S.C. § 101 is respectfully requested. Without admitting to the propriety of the rejections of Claims 1-19 under 35 U.S.C. § 102(b), applicants have amended Claims 1, 6, and 13 to clarify the claimed invention and to bring forth what was inherent in those claims.

Prior to discussing in detail why applicants believe that all of the claims in this application are allowable, a brief description of applicants' invention and brief descriptions of the applied references are provided. The following discussions of the disclosed embodiments of applicants' invention and the teachings of the applied references are not provided to define the

scope or interpretation of any of the claims of this application. Instead, such discussions are provided to help the Office better appreciate important claim distinctions discussed thereafter.

Summary of Sirer et al.

Similar to applicant's claimed invention, Sirer et al. is directed to an access control language for Web services, but the similarity ends there. The language of Sirer et al. uses three basic security rules, which consist of predicate rules, sequence rules, and implication rules. See Table 1 and Section 3.1 of Sirer et al. Predicate rules resemble guarded commands as they specify that the action can only proceed if the condition is satisfied. Sequencing rules are used to express temporal dependencies on a user's actions in the past. Implication rules are used to specify dependencies on, or requirements from, future behavior. For instance, implications can be used to specify that, following a user's visit to a page to initiate a transaction, either the user must visit another URL to compete the transaction, or the system ought to abort the transaction and clean up system state.

Applicant's claimed invention does not make use of predicate rules, sequence rules, and implication rules, which are required by the system of Sirer et al. for his system to work properly.

The Claims Distinguished

The Office has failed to show, and applicants are unable to find, where the cited and applied reference discloses the subject matter of the claimed invention. For example, the cited and applied reference fails to teach "a user Web service for representing a user having an expressed user access scope and a content Web service for representing a piece of content having an expressed content access scope," as recited in Claims 1, 6, and 13, albeit in a different manner.

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The Office has indicated that the above pre-amended recited claim limitation of Claim 1 can be found at Section 3.1 of Sirer et al., a portion of which reads as follows:

> In the discussion below, we provide a simplified running example from an e-publishing system. To authenticate a user, a web server typically will check a submitted password and issue a cryptographically encrypted authentication token. This operation can be specified in our policy language with the following implication clause:
>
> http://sitename/login(user userid, passwd passwordid) AND MD5Hash(passwordid) = Extract(user, "password", user_col=userid) IMPLIES CreateAuthToken(token_name, userid, passwordid)

Nothing in Sirer et al. discloses the claimed invention. The claimed invention requires "a user Web service for representing a user having an expressed user access scope," as recited in Claim 1, and it also requires "a content Web service for representing a piece of content having an expressed content access scope". In other words, not only must there be an expressed user access scope but in addition there must be an expressed content access scope. In contrast, Sirer et al. advocates the use of a language to specify security policies for one access scope, which only pertain to actions. This teaches precisely opposite from what is required by the claimed invention as recited in Claim 1 in which not only an expressed user access scope be made explicit but also an expressed content scope. Neither can be found in the teachings of Sirer et al.

Moreover, the claimed invention requires "the user Web service communicating with the content Web service to access the piece of content when the expressed user access scope overlaps with the expressed content access scope without using predicate rules, sequencing rules, and implication rules" as recited in Claim 1 among other limitations. Section 3.1 of Sirer et al., as cited and applied by the Office, reads as follows:

> The types of access control specifications most commonly used by web applications consist of predicate rules, sequencing rules and implication rules. Predicate rules resemble guarded commands, as they specify that the action can only proceed if the condition is satisfied. Sequencing rules

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> are used to expressed temporal dependencies on a user's actions in the past. Implication rules are used to specify dependencies on, or requirements from, future behaviour. For instance, implications can also be used to specify that, following a user's visit to a page to initiate a transaction, either the user must visit another URL to complete the transaction, or the system ought to abort the transaction and clean up system state.

These teachings of Sirer et al. are the opposite of what is required by the claimed invention. A user's access scope, unlike in a role-based access control model, can be expressed independently of the access scope of the piece of content. The determination of when a user has permission to access a piece of content is made at access time by determining whether there is an overlap between the access scope of a user and the access scope of a piece of content. This decoupling is possible, allowing the piece of content to be granted to classes of users without ever needing to form an explicit relationship tying users to the piece of content (which is what the language of Sirer et al. is trying to do by forcing programmers to specify upfront who can access what). Under the claimed invention, access scopes of users may be completely defined via expressions without needing to determine which pieces of content are accessible via certain access scopes, and, at the same time, access scopes of pieces of content may be completely defined via expressions without any reference to classes of users. This reduces the size of the permission space, hence reducing exponential role explosion and simplifying administration of the system. Because Sirer et al. does not disclose the identical subject matter, a *prima facie* case of anticipation has not been established by the Office.

The Office has also failed to show, and applicants are unable to find, where the cited and applied reference discloses "requesting the discovery framework by the content Web service for an access evaluator Web service to evaluate whether an access scope of the user Web service overlaps with an access scope of the content Web service to grant access to the piece of content, the access scope of the user Web service being conveyed in a first expression independently

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from a second expression that conveys the access scope of the content Web service without using predicate rules, sequencing rules, and implication rules," as recited in Claim 6, among other limitations. Consequently, a *prima facie* case of anticipation has not been established by the Office.

The Office has also failed to show, and applicants are unable to find, where the cited and applied reference discloses "requesting the discovery framework by the content Web service for an access evaluator Web service to evaluate whether an access scope of the user Web service overlaps with an access scope of the content Web service to grant access to the piece of content without forming an explicit relationship tying the user Web service to the content Web service via predicate rules, sequence rules, and implication rules," as recited in Claim 13, among other limitations. Consequently, a *prima facie* case of anticipation has not been established by the Office.

Because the Office has failed to state a *prima facie* case of anticipation, the rejections should be withdrawn. Independent Claims 1, 6, and 13 are clearly patentably distinguishable over the cited and applied references. Claims 2-5, 6-12, and 14-19 are allowable because they depend from allowable independent claims and because of the additional limitations added by those claims. Consequently, reconsideration and allowance of Claims 1-19 is respectfully requested.

Respectfully submitted,

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